

FIG. 1

101 image input unit;
101a to 101n camera;
102 face region detecting unit;
103 face feature extracting unit;
104 person recognizing unit;
105 registration information holding unit;
106 output apparatus;

FIG. 3

301 **image input unit**;
301a to 301n **camera**;
302a to 302n **face region detecting unit**;
304 **photograph judging unit**;
303a to 303n **face feature extracting unit**;
305 **person recognizing unit**;
306 **registration information holding unit**;
307 **output apparatus**;

FIG. 4

401 image input unit;
401a to 401n camera;
404a to 404n face region detecting unit;
403 face feature point predicting unit;
405 face feature extracting unit;
402a to 402n face feature point detecting unit;
406 person recognizing unit;
407 registration information holding unit;
408 output apparatus;

FIG. 5

501 image input unit;
501a to 501n camera;
502 face region detecting unit;
503 face direction predicting unit;
504 registration information holding unit;
505 output apparatus;

FIG. 7

- S1 input images from "n" sets of cameras;
- S2 extract face feature points;
- S3 feature point which could not be extracted is present?
- S4 at least two pieces of respective feature points can be detected?
- S5 calculate three-dimensional positions of feature points whose corresponding relationship can be established;
- S6 convert three-dimensional coordinate into feature points viewed from other cameras based upon three-dimensional positions;
- S7 extraction of feature point succeeds;
- S8 predicting process operation is accomplished;
- S9 extraction of feature point fails;

FIG. 9

901a camera 1, face detection result,
user "A" --- bad, user "B" --- good;
901b camera 2, face detection result,
user "A" --- good, user "B" --- bad;
901c camera 3, face detection result,
user "A" --- good, user "B" --- bad;
902 user "A";
903 user "B";

FIG. 10

1001 image input unit;
1001a to 1001n camera
1002a to 1002n face feature point detecting unit;
1003 others mixture judging unit;

FIG. 11

1001a to 1001n camera

1002a to 1002n face feature point detecting unit;

1003 others mixture judging unit;

【書類名】 図面

〔図1〕

Fig-1

画像入力部 101

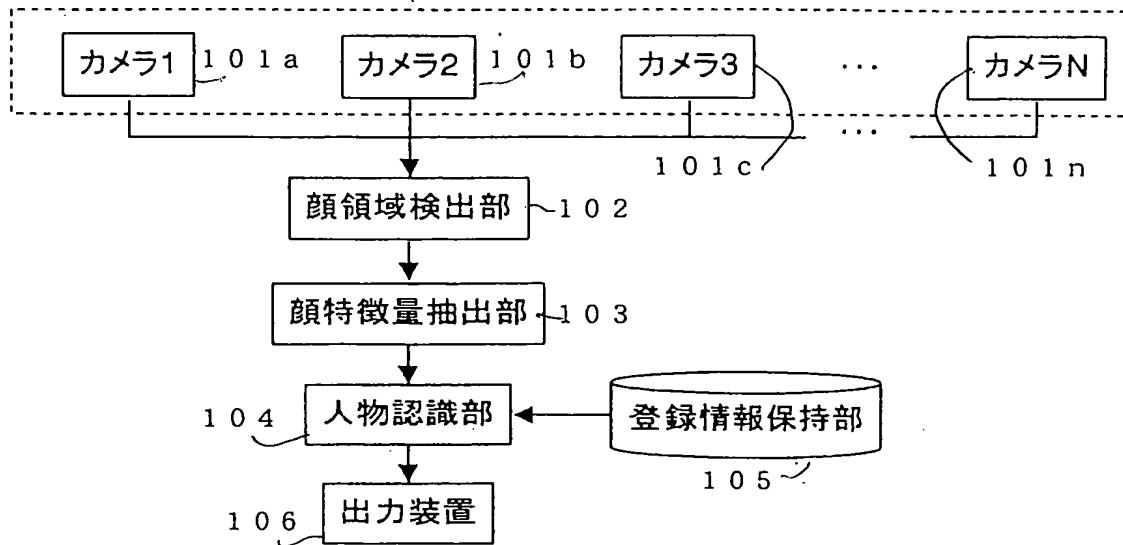
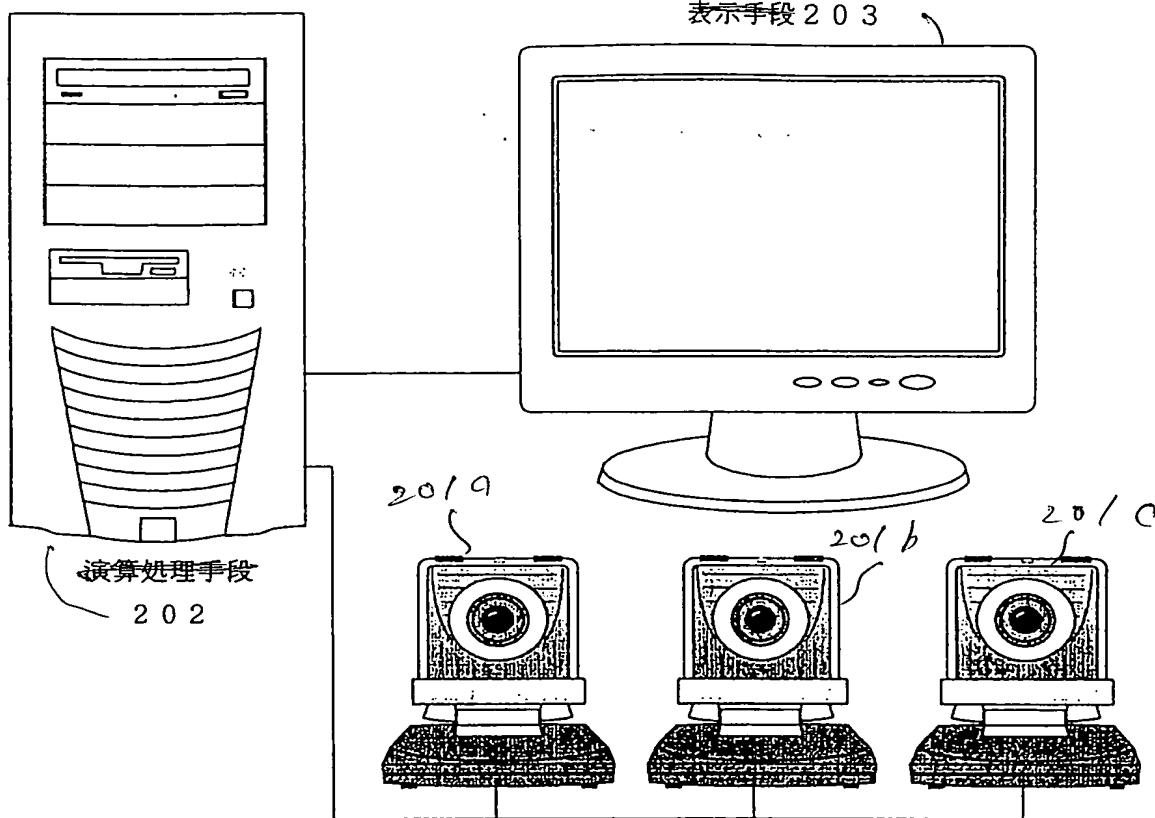


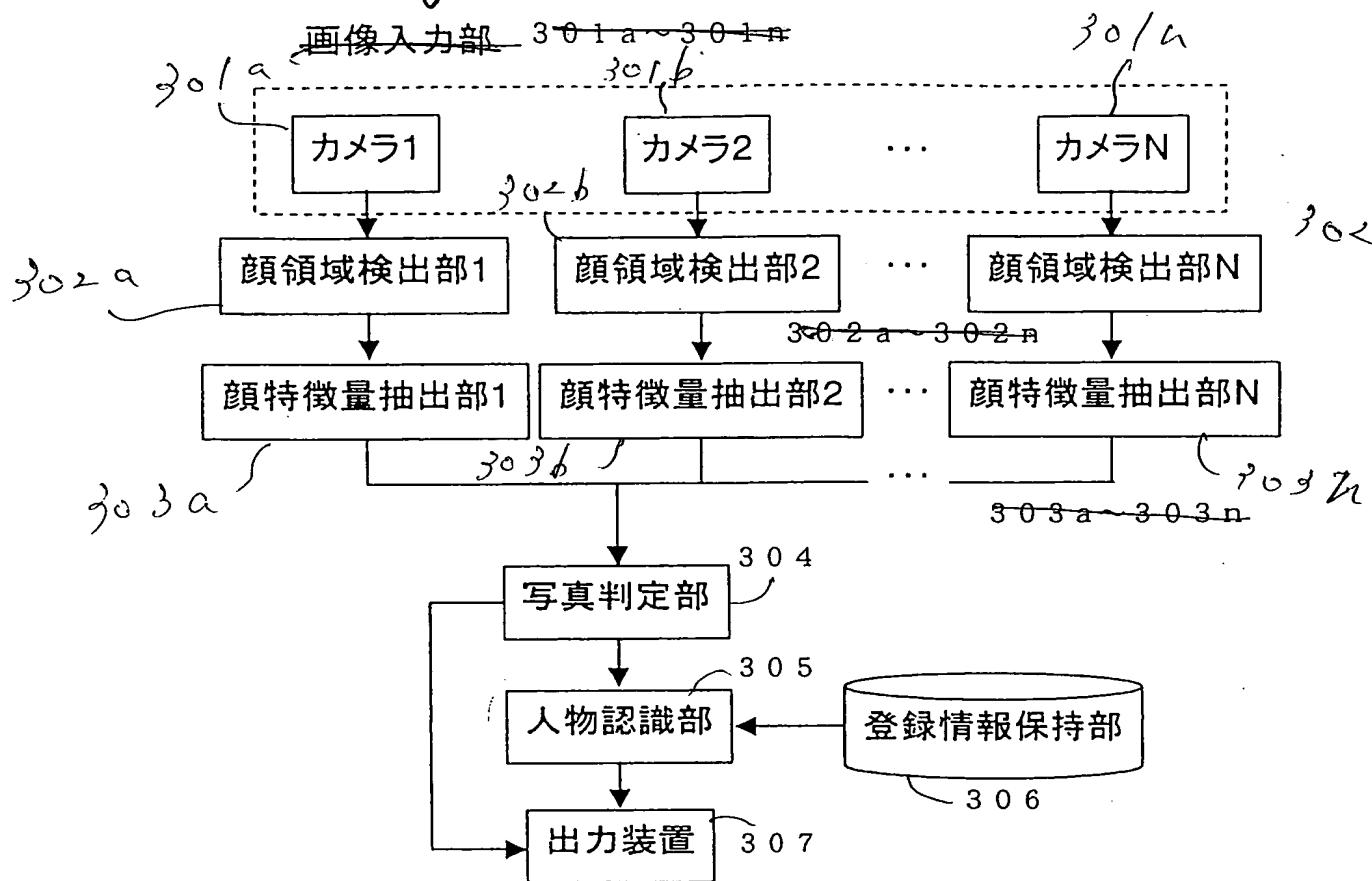
图2

Fig. 2

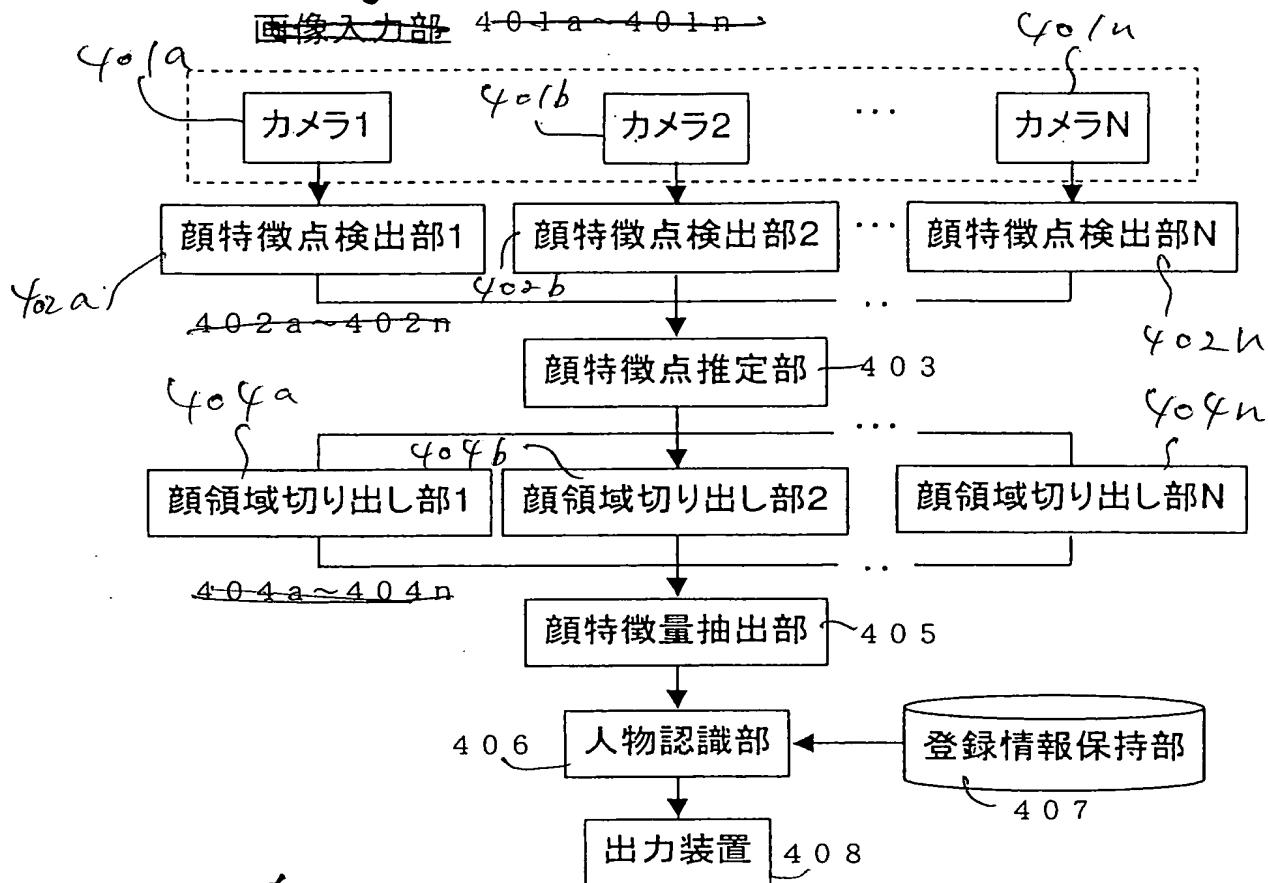


画像処理手段 201a ~ 201c

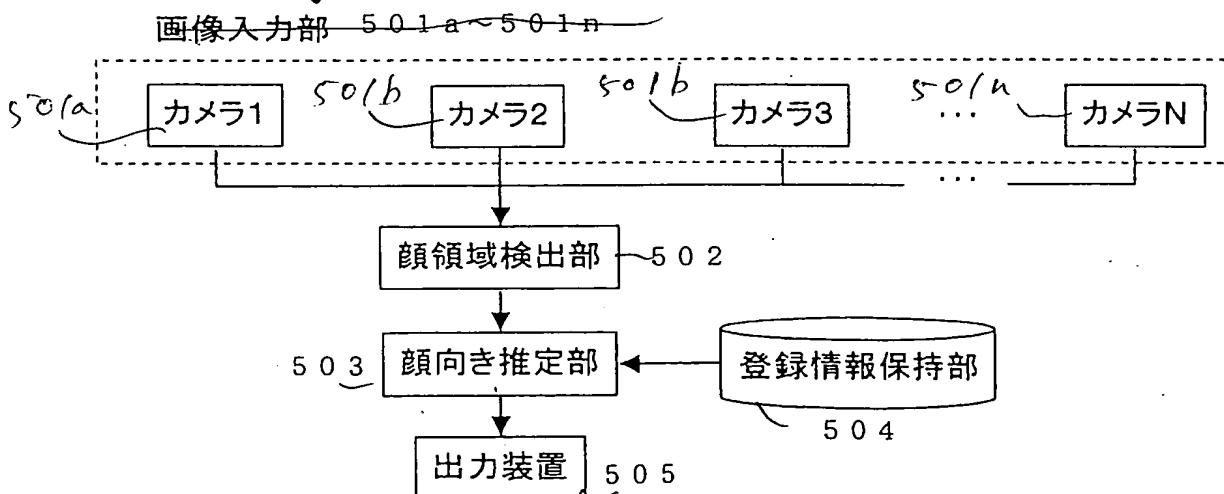
[図3] Fig. 3



[図4] Fig. 4

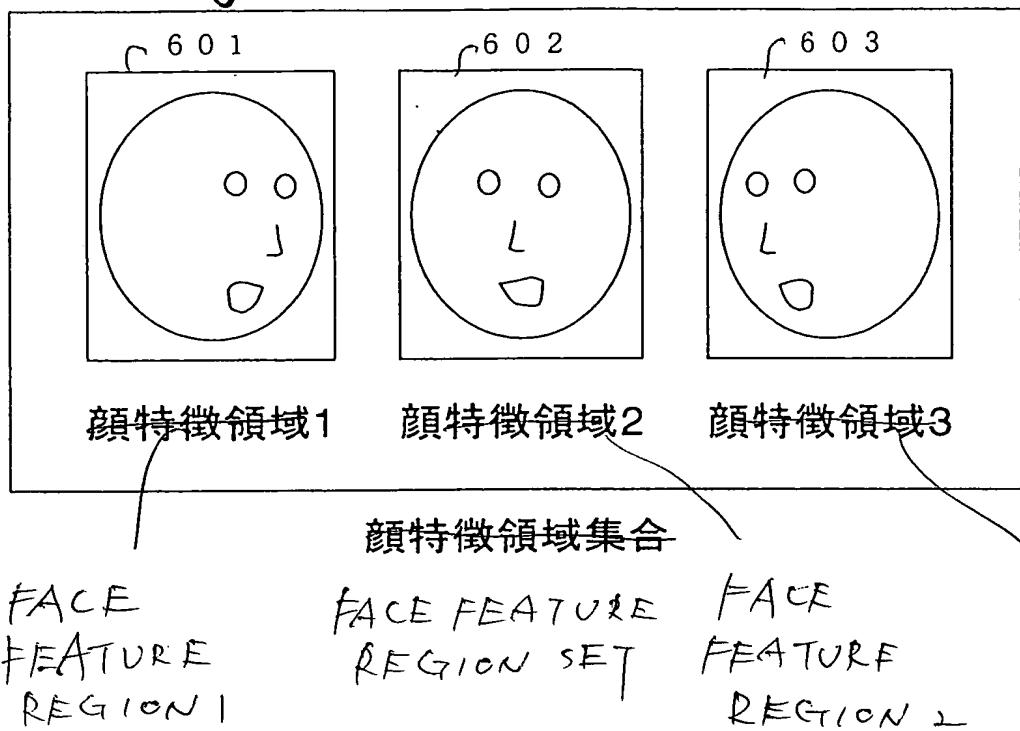


[図5] Fig. 5



[図6]

Fig. 6



[図7] Fig.7

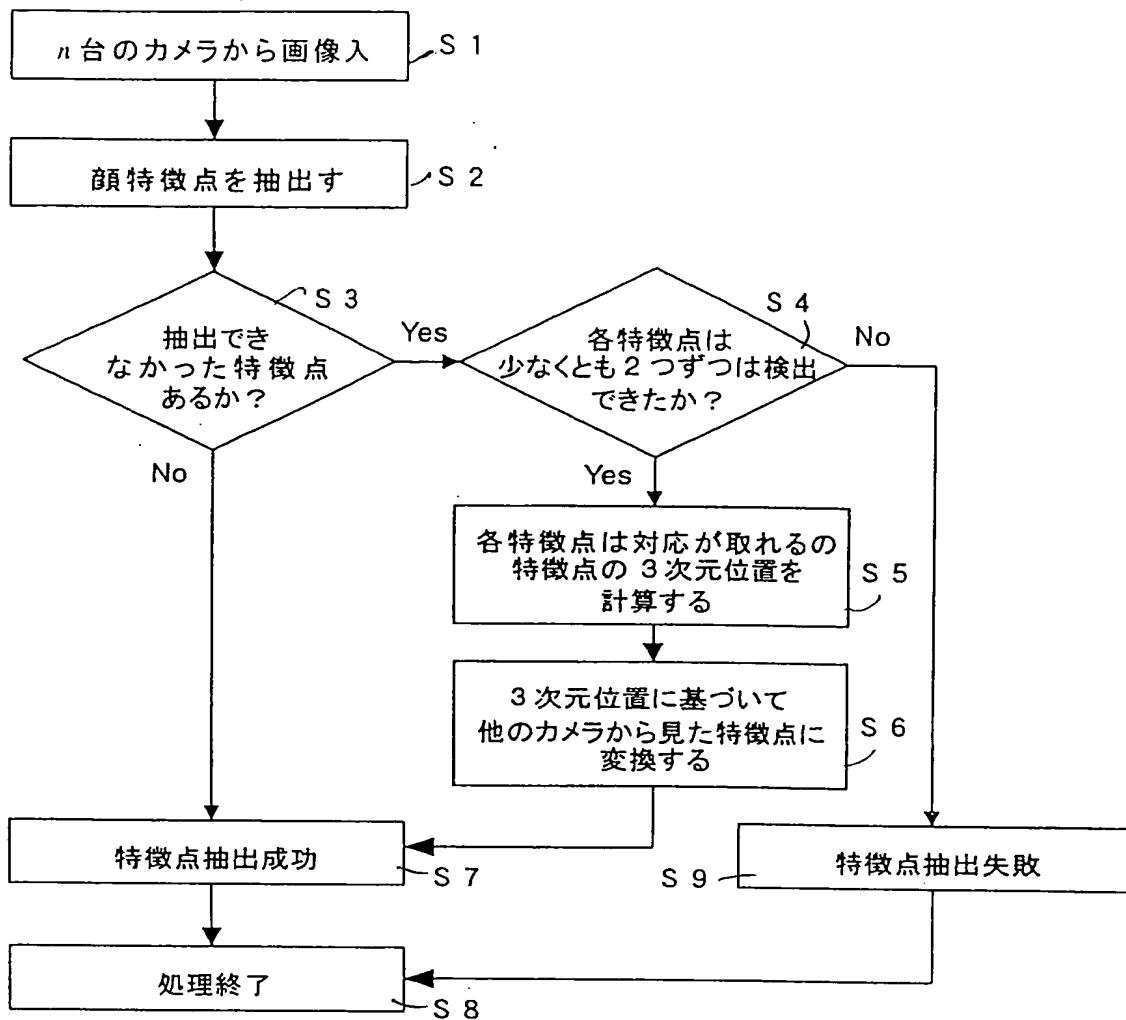
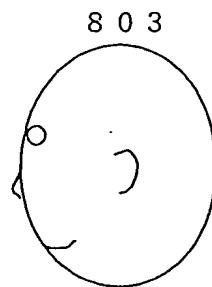
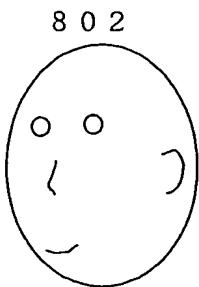
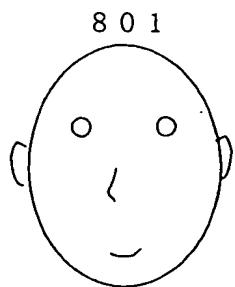
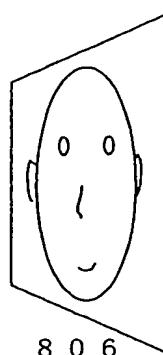
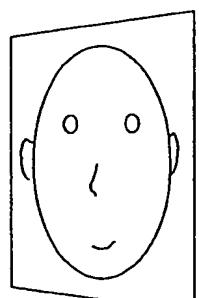
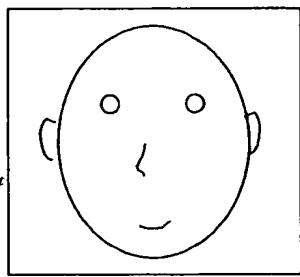


図8 Fig. 8

実際の顔
ACTUAL
FACES



写真の顔
PHOTOGRAPH
FACES



804

805

806

[図9]

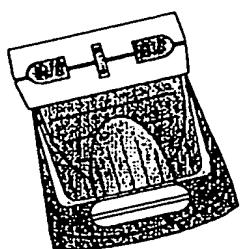
Fig. 9

カメラ1 顔検出結果
ユーザA ×
ユーザB ○

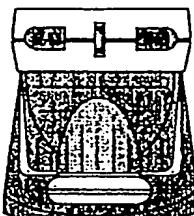
カメラ2 顔検出結果

ユーザA ○
ユーザB ×

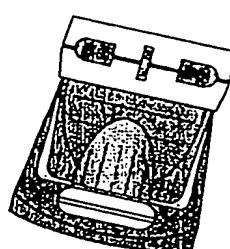
カメラ3 顔検出結果
ユーザA ○
ユーザB ×



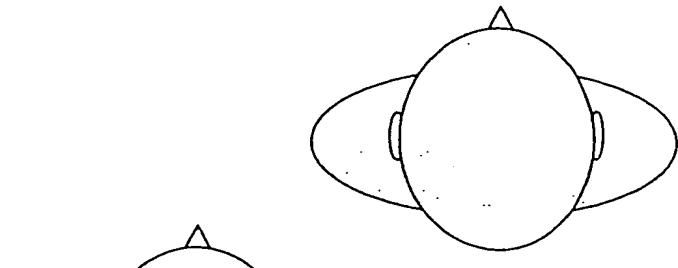
901a



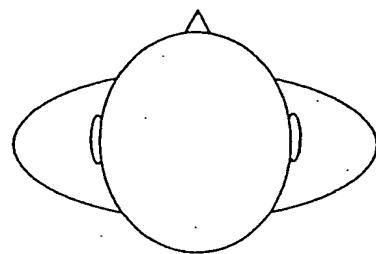
901b



901c



902: ユーザA



903: ユーザB

Fig. 10

[図10]

画像入力部 1001

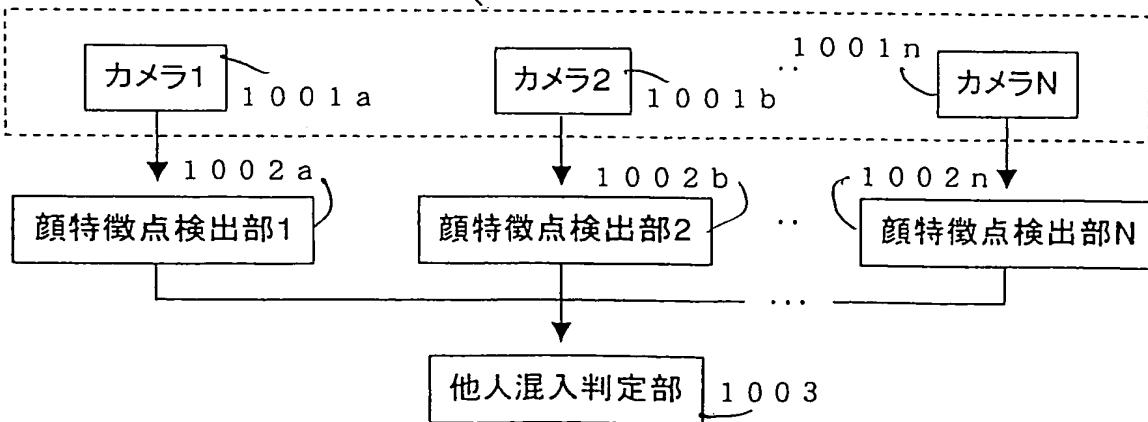


Fig. 11

